



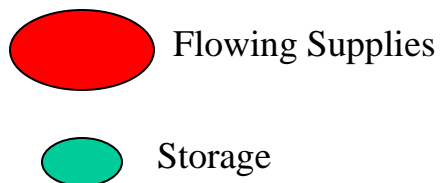
NW Natural

# ***Natural Gas Outlook***

## **Presentation to the Washington Utilities & Transportation Commission**

Randy Friedman  
Director, Gas Supply  
October 12, 2005

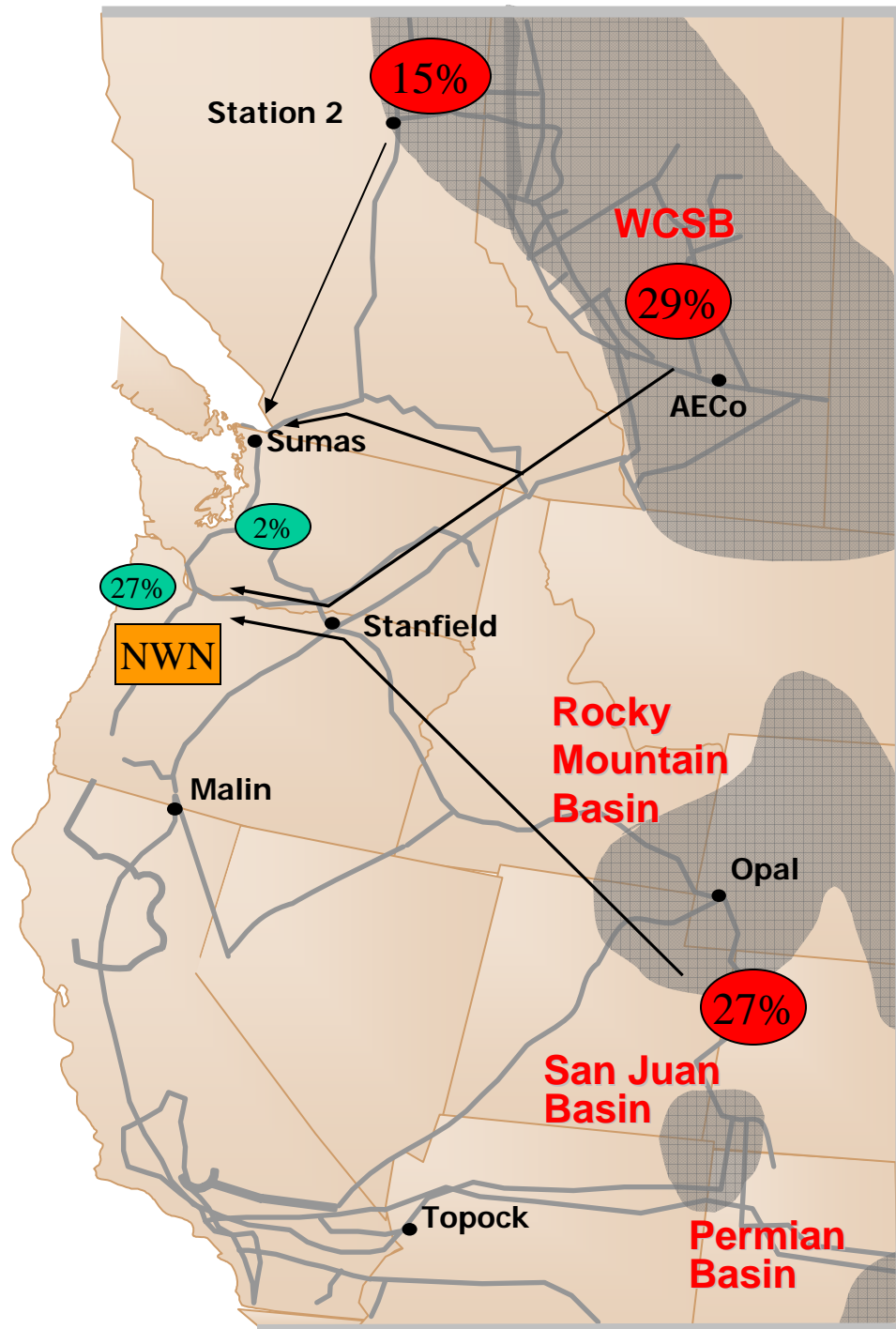
# **NW Natural** **2005/06 Winter Supplies** **(Average Winter Day)**



## Avg. Day Winter Supply Volumes (MMBtu):

British Columbia (Stn 2)	58,000
Alberta	115,000
Rockies	110,000
Jackson Prairie	10,000
Mist	107,000
Portland LNG	0
Newport LNG	0
Plymouth LNG	0
<u>Total</u>	<u>400,000</u>

Assumes that storage is 100% full on Nov 1.





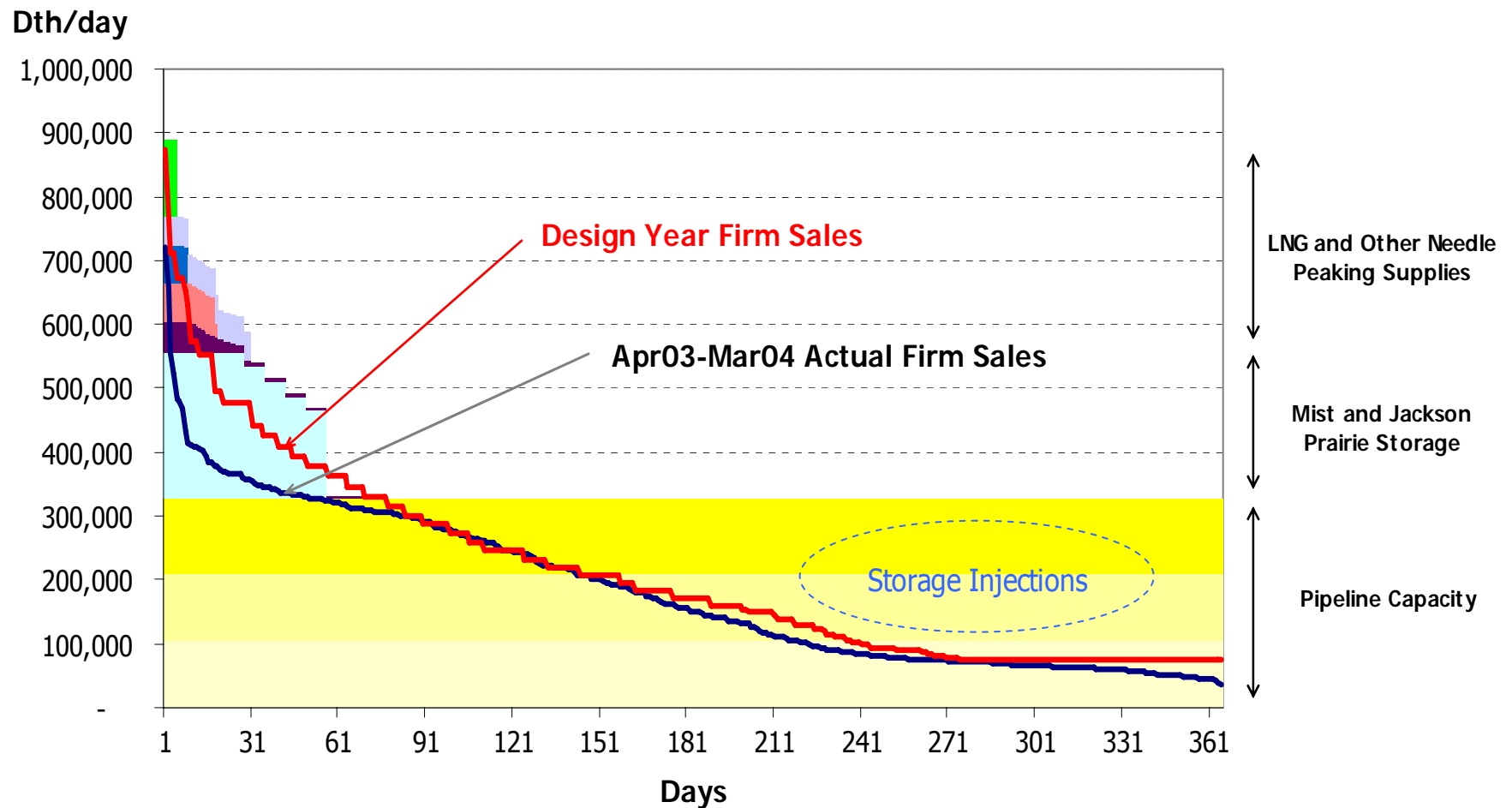
## *Current Storage Levels*

As of 7am on October 9, 2005:

- ◆ Mist – 8.2 Bcf for Core (92% full)  $\approx$  \$7.00/Dth
  - Total Core plus Interstate is 13.1 Bcf (95% full)
  - Initial fill complete this week, top off decision in late October
- ◆ Jackson Prairie – 1.1 Bcf (98% full)  $\approx$  \$6.50/Dth
  - Was 100% full on Sep. 30<sup>th</sup> per NWP tariff requirement
- ◆ Newport LNG – 1.1 Bcf (99% full)  $\approx$  \$7.00/Dth
  - Will be 100% full this week
- ◆ Portland LNG – 0.6 Bcf (96% full)  $\approx$  \$5.00/Dth
  - Liquefaction completed for the season
- ◆ Plymouth LNG – 0.4 Bcf (90% full)  $\approx$  \$7.00/Dth
  - On schedule to be 100% full by end of October



## Load Duration Curves and Resource Stack





## *Peak Planning Criteria*

- Based on “Design” Year
  - Coldest Heating Season over Last 20 Years
    - ❖ Currently 1985-86
  - Coldest Single Day over Last 20 Years
    - ❖ Currently 53 HDD from February 3, 1989
- Only Looks at Firm Sales
  - Interruptible Sales Curtailed if/when needed
- Assumes Everything Works
  - No Redundancy to allow for Resource Outages



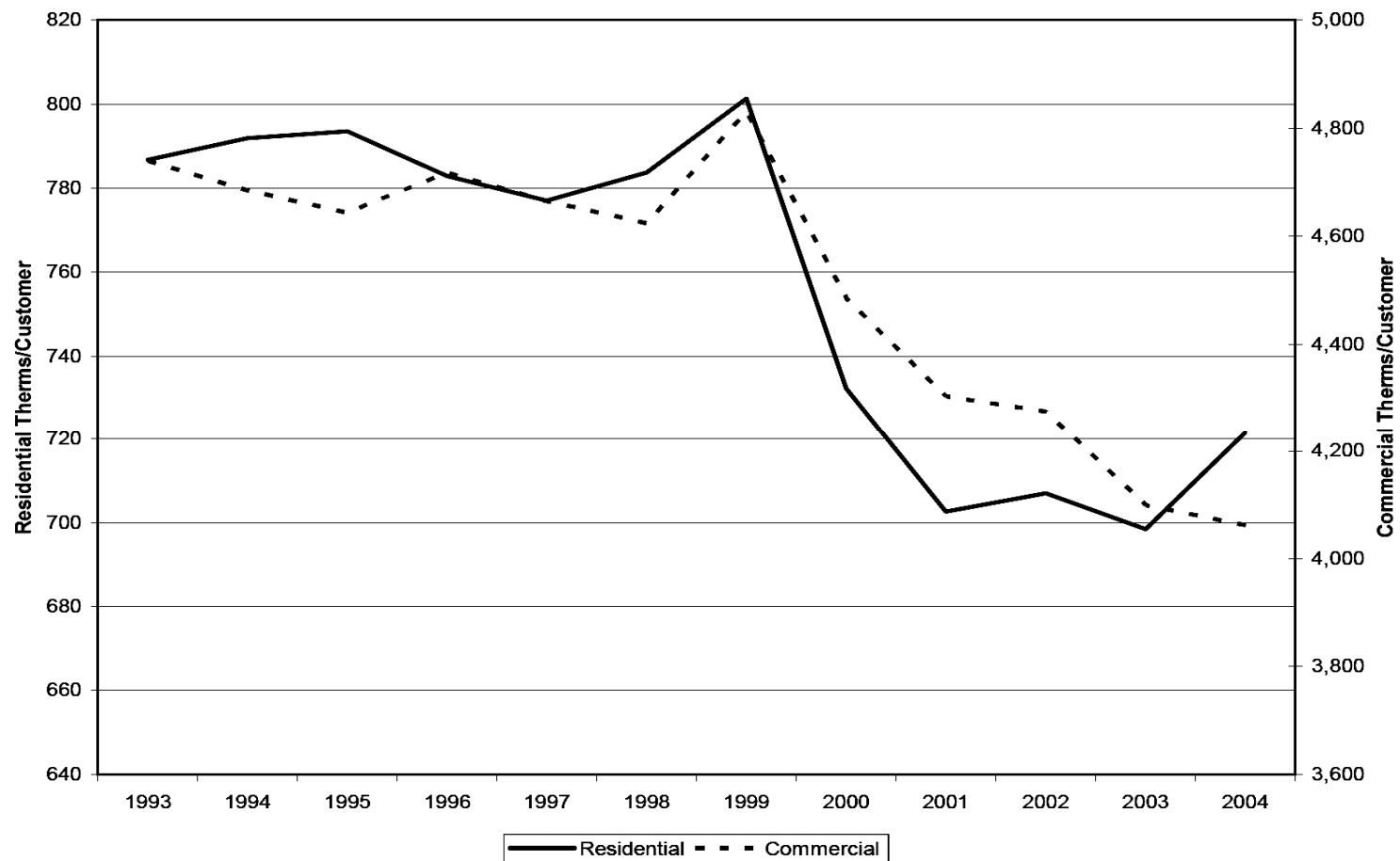
## ***Risk Factors***

- **Customer Usage Patterns**
  - Declining Usage – Behavior vs. Structural
  - Could there be a Reversal on Peak Days?
  
- **Migration from Transportation back to Sales**
  - Could Substantially Increase Sales Volumes
  - Another Layer of Complexity to Resource Dispatch
  - Assessing Potential Economic Impact on Core Customers
  
- **Managing Credit**
  - Rising Prices → Stronger Credit Requirements
  - Need to Keep Broadening Array of Counterparties



NW Natural

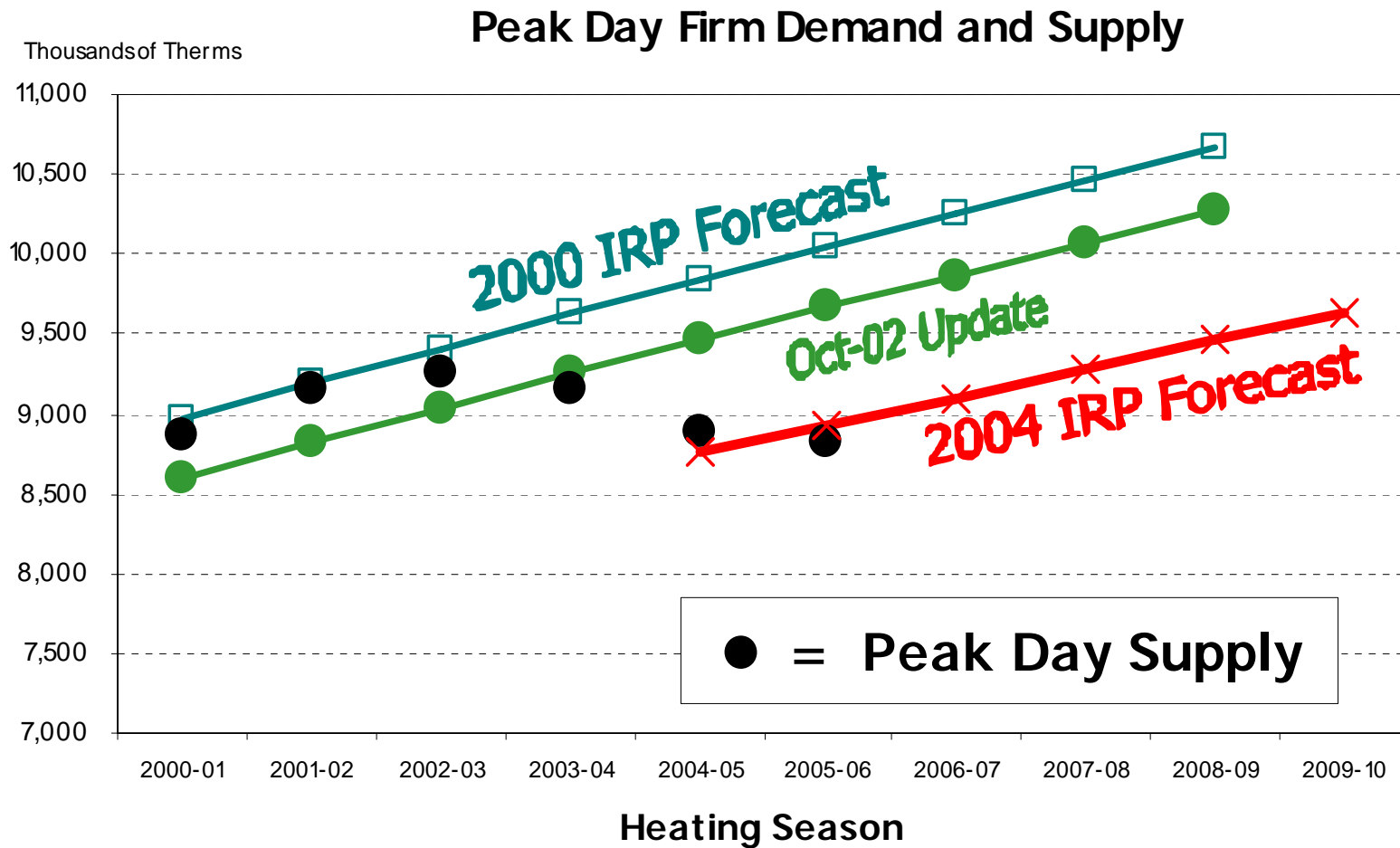
# Customer Usage Patterns



Source: Christensen Associates Energy Consulting, *A Review of Distribution Margin Normalization as Approved by the Oregon Public Utility Commission for Northwest Natural*, March 31, 2005



# Impact on Forecasts







## *Contingency Plans*

- Curtailment of Interruptible Sales
- Recall Agreements
- Overrun Service
- Citygate Deliveries
- Last Resort: Pre-emption



## ***Storage Expansion***

- **Mist Underground Storage**
  - Interstate Development in Advance of Core Need
  - Reservoirs – Retrofitting 2 older pools
    - Finishing First Project Now
    - Second Project on Hold due to Flat Demand
  - Compression – Already in place
  - Pipeline Take-Away – Completed SMPE in 2004
  
- **No Plans to Expand LNG Plants**
  - Periodically analyze Newport Pipeline Take-Away

# ***Oregon LNG Import Terminals***

	Bradwood "Leading the Pack"	Jordan Cove & Port Westward "A Close Second"	Skipanon & Tansy Point "Barely Out of the Gate"
FERC	<ul style="list-style-type: none"> <li>◆ NEPA pre-filing accepted</li> <li>◆ Preparation of full permit filing now underway</li> </ul>	<ul style="list-style-type: none"> <li>◆ NEPA pre-filings delayed               <ul style="list-style-type: none"> <li>- PW lacked site control</li> <li>- JC needed additional funding</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>◆ No discussion of pre-filings               <ul style="list-style-type: none"> <li>- Skipanon struggling with zoning issues</li> <li>- No reports from TP</li> </ul> </li> </ul>
Funding	<ul style="list-style-type: none"> <li>◆ Fully funded for permitting phase</li> </ul>	<ul style="list-style-type: none"> <li>◆ Nothing announced on PW</li> <li>◆ JC has partial funding for permitting</li> </ul>	<ul style="list-style-type: none"> <li>◆ No reports on either project</li> </ul>
Supplier	<ul style="list-style-type: none"> <li>◆ No commitment</li> </ul>	<ul style="list-style-type: none"> <li>◆ No commitment</li> </ul>	<ul style="list-style-type: none"> <li>◆ No commitment</li> </ul>

➤ **Likely Source of LNG – Whatever is Closest**